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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,049	10/12/2000	Norihisa Miyoshi	2000_1162A	5687

7590 07/27/2005
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2033 K Street N W Suite 800
Washington, DC 20006

EXAMINER

DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/623,049

Applicant(s)

MIYOSHI ET AL.

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' remarks and amendments filed on May 5, 2005 have been carefully considered. Claims 1 and 15 have been amended. Claim 17 has been canceled. New claims 18-21 have been added. Claims 1-16 and 18-21 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3-4, 6, 9, 13-14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeda et al. (4,886,246). Regarding claim 1, Maeda discloses a fluidized-bed gasification furnace (Figure 2) utilizing a fluidized-bed reactor (F2), said fluidized-bed gasification furnace comprising: a fluidized bed portion (7b) for a fluidized medium said fluidized bed portion having a fluidized bed floor portion at a bottom part thereof; a discharge port (1b) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium (7a); a fluidized medium discharge chute having a medium-receiving end (top end of distributor 6) and a medium discharge end (bottom end of distributor 6), said medium-receiving end being connected to said discharge port (1b) and said fluidized medium discharge chute (6) extending downwardly from said medium receiving end connected (top end of distributor 6) to said discharge port (1b) to

said medium discharge end (bottom end of distributor 6) disposed below said discharge port (1b) and a gas blow device (conduit 3, Col. 5, lines 36-39) provided below said fluidized medium discharge chute (6) for blowing a gas into said medium discharge end (bottom end of distributor 6) of said fluidized medium discharge chute (6) toward said medium-receiving end (top end of distributor 6) of said fluidized medium discharge chute (6). Regarding claim 3, Maeda shows the gas blow device (conduit 3) is provided at the lowermost part of said fluidized medium discharge chute (6). Regarding claims 4 and 9, Maeda discloses the gas blow device uses steam, carbon dioxide, or oxygen-free gas (Col. 7, lines 47-53). Regarding claims 6, 13, and 14, Maeda discloses a fluidized bed furnace with plurality of performing sections or units such as the discharge chute 4 for discharging large or medium particles, "fluidized bed" at 7b for reducing medium particles, and portion 1a for reducing finer particles, and exhaust duct 11 to accommodate waste gas. In addition, the claim language "so that said fluidized-bed reactor can be modified to accommodate fuels having different properties by changing an arrangement of said units" has been interpreted as intended use and does not further recite structural limitations for the features of the apparatus (See MPEP 2114). Regarding claim 16, Maeda shows an outer wall of said fluidized-bed gasification furnace is in a form of a rectangle (1a). Note, instant claims 1, 3-4, 6, 9, 13-14, and 16 structurally read on the apparatus of Maeda et al.

2. Claims 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Vidt (4,790,251). Regarding claims 18 and 20, Vidt discloses a fluidized-bed gasification

Art Unit: 1764

furnace (Fig) utilizing a fluidized-bed reactor, said fluidized-bed gasification furnace comprising: a fluidized bed portion for a fluidized medium, said fluidized bed portion having a fluidized bed floor portion at a bottom part thereof; a discharge port (section below flanged coupling 13) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium; a fluidized medium discharge chute (5) connected to said discharge port and extending downwardly from said discharge port to below said discharge port; a device (11) for mechanically withdrawing the fluidized medium, said device being provided in the vicinity of the lowermost part of said fluidized medium discharge chute; and a gas blow device (65) for blowing a gas into an interior of said fluidized medium discharge chute, said gas blow device being provided below said device for mechanically withdrawing the fluidized medium. Regarding claim 19, Vidt discloses the gas blow device uses steam, carbon dioxide, or oxygen-free gas as a gas to be blown (Col. 4, lines 1-9). Regarding claim 21, Vidt discloses the fluidized-bed reactor is divided into units for performing respective functions (coal combustion unit 3, screw conveyor 11, hoppers and etc.). The claim language "so that said fluidized-bed reactor can be modified to accommodate fuels having different properties by changing an arrangement of said units" has been interpreted as intended use and does not further recite structural limitations for the features of the apparatus (See MPEP 2114). Note, instant claims 18-21 structurally read on the apparatus of Vidt.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 2, 5, 7-8, 10-12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda '246 in view of Ohshita et al. (4,823,740). Regarding claims 2, 5, and 10-11, Maeda does not show a mechanical device for removing the fluidized medium in the lowermost part of the fluidized medium discharge chute. Ohshita '740 teaches it is conventional to provide a screw conveyor 72 as a mechanical means of removing the incombustible residue or fluidizing medium away from a discharge passage 69 or discharge chute (Col. 6, lines 57-63). Thus, it would have been obvious in view of Ohshita to one having ordinary skill in the art to provide a screw conveyor as taught by Ohshita in the fluidized-bed furnace of Maeda in order to remove

incombustible residues and/or fluidized medium away from the discharge chute. Claims 7-8 recite limitations similar to claims 3 and 4, respectively; thus, claims 7-8 are rejected for the same reasons as applied to claims 3 and 4, above. Regarding claims 12 and 15, Maeda discloses a fluidized bed furnace with plurality of performing sections or units such as the discharge chute 4 for discharging large or medium particles, "fluidized bed" at 7b for reducing medium particles, and portion 1a for reducing finer particles, and exhaust duct 11 to accommodate waste gas. In addition, the claim language "so that said fluidized-bed reactor can be modified to accommodate fuels having different properties by changing an arrangement of said units" has been interpreted as intended use and does not further recite structural limitations for the features of the apparatus (See MPEP 2114).

Response to Arguments

Applicant's arguments filed 5/5/05 have been fully considered but they are not persuasive. With respect to Applicants' argument of the Maeda reference fails to disclose a gas blow device 3 blows a gas into the medium-discharge end of the discharge chute 4 toward the medium-receiving end of the discharge chute 4, Examiner respectfully disagrees. Maeda clearly shows the gas blow device 4 blows a gas from the bottom end of the chute (6) (bottom of distributor 6) toward the medium receiving end of the chute (top end of distributor 6). With respect to the argument in claim 18, Vidt shows the purge gas 65 is provided below the screw conveyor and the gas is blown into the screw conveyor into the fluidized medium discharge chute. With respect to the

argument of the Ohshita reference, Examiner agrees that Ohshita fails to disclose a gas blow device is provided below the screw conveyor; however, the Vidt reference discloses such feature as described in paragraph 2.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
July 13, 2005
TD



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700